

Integrating Poster Comment Cooperative Learning with *Longko'* Cultural Values to Enhance Students' Learning Outcomes in Character Education

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ABSTRACT

Improving students' character education learning outcomes requires instructional models that are both interactive and culturally relevant. Traditional teaching methods often fail to fully engage students or reflect local cultural values. This study investigates the effectiveness of integrating the Poster Comment cooperative learning model with *Longko'* cultural values to enhance students' learning outcomes in character education. A 2x2 factorial experimental design was employed involving 100 undergraduate students from a Christian higher education institution in Indonesia. Participants were randomly assigned to four groups based on two variables: learning model (Poster Comment vs. Non-Poster Comment) and cultural integration (*Longko'* vs. Non-*Longko'*). Learning outcomes were assessed through pre- and post-tests using validated multiple-choice and essay instruments. Data were analyzed using two-way ANOVA. The findings demonstrated significant main effects of both the learning model and cultural values on students' learning outcomes. The Poster Comment approach outperformed the Non-Poster model ($F(1,46) = 45.77, p < .001$), and *Longko'* cultural integration significantly improved scores compared to non-cultural approaches ($F(1,46) = 196.40, p < .001$). A significant interaction effect ($F(1,46) = 11.79, p = .001$) indicated the greatest gains occurred when Poster Comment was combined with *Longko'* values. Integrating cooperative learning with indigenous cultural values fosters deeper understanding and engagement, leading to improved learning outcomes in character education. This study highlights the importance of culturally responsive pedagogy in higher education and supports the development of localized, value-driven instructional models.

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1. INTRODUCTION

Character education plays a fundamental role in shaping students' moral foundations and guiding their behavior in both academic and social contexts. Through character education, students are

introduced to essential values such as honesty, responsibility, empathy, and cooperation, which are necessary for developing ethical decision-making and positive interpersonal relationships (Sujarwo et al., 2023). In the context of 21st-century education, schools are expected not only to focus on academic achievement but also to nurture individuals who demonstrate integrity, respect for others, and the ability to participate constructively in society. Consequently, character development has become an integral component of educational objectives across many educational systems. However, despite its importance, the implementation of character education in many classrooms often remains limited to theoretical instruction rather than experiential learning. Traditional teaching approaches frequently emphasize the transmission of moral knowledge rather than actively engaging students in practicing ethical behaviors within real-life situations (Sujarwo et al., 2024). As a result, students may understand moral concepts conceptually but struggle to demonstrate them in everyday interactions. This discrepancy highlights the need for innovative pedagogical approaches that not only convey moral values but also enable students to internalize and apply them through meaningful learning experiences.

One promising instructional approach for addressing this issue is cooperative learning. Cooperative learning is widely recognized as an effective teaching strategy that encourages students to work collaboratively, interact actively, and engage in shared problem-solving processes (Akhiruddin et al., 2022). Through structured group activities, cooperative learning promotes positive interdependence, individual accountability, and constructive group dynamics, all of which contribute to increased student engagement and improved learning outcomes (Ferguson-Patrick, 2020). By emphasizing collaboration and mutual support, this approach allows students to learn from one another while developing social competencies such as communication, negotiation, and respect for diverse perspectives. Among various cooperative learning techniques, the poster comment strategy has gained attention as a creative method that encourages students to visually represent ideas and exchange feedback through peer commentary. In this approach, students present their ideas through posters and receive constructive feedback from peers, creating opportunities for reflective dialogue and deeper conceptual understanding (Ross et al., 2019). Beyond strengthening academic comprehension, the poster comment technique supports the development of critical thinking and communication skills, which are essential elements in character education because moral values must be understood, discussed, and reflected upon rather than simply memorized.

Despite the growing body of research on cooperative learning, its integration with indigenous cultural values remains relatively underexplored, particularly within the Indonesian educational context. Incorporating cultural elements into teaching practices is increasingly recognized as an important dimension of meaningful education. Culturally responsive pedagogy acknowledges that students' cultural backgrounds significantly influence their attitudes, motivation, and learning styles (Brown, 2017). When educational practices align with students' cultural identities and experiences, learning becomes more relevant and engaging. In culturally diverse countries such as Indonesia, integrating local cultural wisdom into classroom practices can strengthen students' sense of belonging and reinforce their cultural identity (Smith et al., 2017). Local cultural values often contain moral principles that align closely with the goals of character education, making them valuable resources for contextualized learning.

Within the cultural context of the Toraja community, the concept of *Longko'* represents a set of traditional values emphasizing dignity, perseverance, mutual respect, solidarity, and collective responsibility. These values form an important moral framework within Torajan society and guide social interactions and communal relationships. *Longko'* not only reflects individual moral integrity but also highlights the importance of maintaining harmony and accountability within the community (Bawan et al., 2022). Integrating these cultural principles into educational settings provides students with culturally grounded references for understanding ethical behavior. By connecting moral learning with local cultural traditions, educators can create learning environments that resonate with students' lived experiences and strengthen the relevance of character education.

The integration of Longko' cultural values with cooperative learning strategies, particularly the poster comment technique, offers a promising approach to enhance both academic engagement and moral development. In this integrated approach, students collaborate in groups, present ideas visually through posters, and provide feedback to peers while reflecting on the moral principles embedded in Longko'-based values. Through this interactive process, students practice critical thinking, constructive communication, and reflective dialogue while simultaneously internalizing cultural and ethical principles that guide their behavior (Paranoan et al., 2018). Such collaborative activities encourage students to demonstrate responsibility, respect, persistence, and empathy in their interactions with others. Therefore, combining culturally responsive pedagogy with cooperative learning strategies has the potential to strengthen the effectiveness of character education by bridging modern educational practices with indigenous cultural wisdom.

In higher education contexts, character education aims to cultivate students' moral reasoning and promote value-based behavior that aligns with both societal expectations and local cultural traditions. The integration of Longko' values into learning activities can serve as a culturally meaningful framework for fostering character development among university students. Longko' embodies principles such as respect, humility, integrity, and communal responsibility, which function as ethical guidelines within the Torajan cultural system (Bawan et al., 2022). When these values are incorporated into educational activities, learning becomes more meaningful and contextually relevant, allowing students to connect academic knowledge with cultural identity and moral reflection. At the same time, cooperative learning approaches such as the poster comment method create opportunities for students to actively participate in discussions, share perspectives, and provide peer feedback in a structured learning environment. This dialogic process encourages reflection and collaborative meaning-making, which are essential components of moral learning (MacIntosh-Murray, 2007).

The conceptual framework of this study proposes that integrating Longko' cultural values within the poster comment cooperative learning model can generate a synergistic effect that enhances student engagement, self-efficacy, and learning outcomes. Cooperative learning provides the pedagogical structure for interaction and collaboration, while cultural integration offers meaningful moral content that guides students' reflections and behaviors. By combining these two dimensions, the instructional design becomes both pedagogically effective and culturally responsive. This approach supports the idea that culturally grounded learning experiences not only improve academic performance but also contribute to students' moral and personal development within character education courses.

The poster comment learning model itself represents an innovative cooperative learning strategy that encourages collaborative inquiry and critical discourse among students. In this method, students create visual posters that present key concepts, arguments, or observations related to the topic being studied. These posters are then displayed and reviewed by peers, who provide comments, questions, and suggestions for improvement (MacIntosh-Murray, 2007; Newsom et al., 2021). Through this process, students engage in active knowledge construction while receiving diverse perspectives from classmates. The exchange of feedback encourages dialogic learning, where ideas are shared, challenged, and refined within a supportive academic environment. Such interactions help students develop essential social and cognitive skills, including active listening, respectful disagreement, and collaborative problem solving (Prichard & Ferreira, 2014). Consequently, the poster comment technique transforms cooperative learning from simple group work into a structured yet flexible learning framework that promotes reflection, accountability, and deeper engagement with course content (Leone & French, 2024; Ross et al., 2019).

Another important dimension of culturally integrated cooperative learning is its potential influence on students' self-efficacy. Self-efficacy refers to individuals' belief in their ability to successfully perform tasks and achieve learning goals. Research suggests that culturally relevant learning experiences can significantly enhance students' self-confidence and motivation because they perceive the learning process as meaningful and connected to their own cultural backgrounds (Smith et al., 2017). When students encounter familiar cultural values within academic settings, they are more

likely to feel recognized and validated, which strengthens their sense of belonging in the learning environment. Additionally, cooperative activities such as poster commenting provide continuous peer feedback that helps students recognize their progress and identify areas for improvement. Constructive feedback from peers can reinforce students' confidence and encourage them to participate more actively in learning activities (Cruz et al., 2020; Gottlieb et al., 2022).

Indonesia possesses a strong cultural tradition emphasizing collective values and social harmony. Concepts such as *gotong royong* (mutual cooperation) and *musyawarah* (deliberative consensus) illustrate the importance of collaboration and shared responsibility in Indonesian society. Similarly, the Longko' leadership system in Toraja reflects principles of collective accountability and community-oriented decision making. These cultural values have historically guided social interactions, conflict resolution, and community development. However, formal education often underutilizes these indigenous principles in classroom practices, relying instead on conventional instructional methods that may not fully resonate with students' cultural contexts (Ferguson-Patrick, 2020). Integrating local wisdom into educational practices can therefore enrich learning experiences by connecting academic knowledge with students' cultural realities. When collaborative learning strategies incorporate cultural values, students are more likely to experience learning as meaningful, motivating, and socially relevant (Arruzza & Chau, 2021).

Furthermore, culturally responsive cooperative learning environments contribute to the development of inclusive classrooms where students feel supported academically and personally. Collaborative activities and peer feedback mechanisms encourage students to respect diverse perspectives, take responsibility for their contributions, and engage in collective problem solving (Leone & French, 2024). Such learning environments not only enhance academic achievement but also support students' personal growth and social development. At a broader level, strengthening character education through culturally grounded pedagogy contributes to national educational goals. Quality education is widely recognized as a key indicator of national development, and effective character education plays a crucial role in fostering responsible citizens capable of navigating the challenges of globalization and digital transformation (Pratama & Susilawati, 2023).

Based on these considerations, this study aims to examine the impact of a culturally integrated cooperative learning model that combines the poster comment strategy with Longko's cultural values on students' self-efficacy. By exploring how this integrated approach influences students' engagement and confidence in learning, the study seeks to provide insights into innovative strategies for strengthening character education in higher education contexts. Ultimately, the findings are expected to contribute to the development of pedagogical practices that integrate modern instructional strategies with indigenous cultural wisdom, thereby promoting both academic excellence and moral development among students.

2. METHODS

2.1 Research Design

This research employed a 2x2 factorial experimental design, a form of quantitative methodology. Researchers choose this design to examine the influence of two independent variables on a single dependent variable and to assess the interaction between the independent variables (Sumaraw et al., 2025). The 2x2 factorial design enables the researcher to examine both the individual main effects of each treatment and the interaction effects that occur when the treatments are combined (Üztemur, 2020). This method provides a comprehensive overview of the impact of each intervention and their combinations on students' learning outcomes. The two independent variables in this study are the implementation of the poster comment strategy (peer feedback) and the incorporation of Longko' cultural values. Each independent variable has two treatment levels: (1) instruction using Longko' cultural values against instruction excluding them, and (2) instruction utilizing the poster comment

technique versus instruction omitting it. The dependent variable is students' academic self-efficacy. This reflects their confidence in performing well academically. The objective of the study is to ascertain the extent to which local cultural integration and active peer engagement via poster feedback enhance students' confidence in their learning capabilities using this experimental methodology.

The approach allowed for the examination of both main effects (the independent impact of each variable) and interaction effects (the collective impact of model and culture) on learning outcomes. Even though the same teacher taught all the groups, the lesson plans and grading rubrics were the same for all of them to lessen teacher bias. To guarantee the data was reliable, two evaluators looked over the students' work and test scores, and inter-rater reliability was established.

Table 1. The illustration of the 2×2 factorial design structure

	Longko'	Non-Longko'
Poster Comment	PC-Longko	PC-Non-Longko
Non-Poster	NPC-Longko	NPC-Non-Longko

This design provided a comprehensive understanding of how cooperative learning strategies and local cultural integration interact to enhance students' character education learning outcomes.

2.2 Population and Sample

Students from the Christian Religious Education Study Program at IAKN Toraja are enrolled in the Character Education course for the 2025/2026 academic year. IAKN Toraja has 264 students. Due to the large number of pupils, it is more logical to use classrooms as the sample unit. The researcher, serving as the instructor for the Character Education class, implemented a cooperative learning technique that integrates Longko' cultural values with Christian higher education. The research primarily focuses on Character Education; however, the concept and methodology can also be applied in other pertinent courses, particularly those emphasizing collaboration.

Cluster random sampling is a method for selecting samples, involving the random selection of entire classes as units of analysis. We randomly selected two classes: one served as the experimental group, utilizing cooperative learning through poster comment strategies, while the other functioned as the control group, receiving traditional direct instruction. The researcher selected the PAK Study Program due to their involvement in teaching the course and the program's relevance to character development. The similarity in students' initial academic performance and self-efficacy toward character education was also considered in class selection. To maintain objectivity, a different certified educator, rather than the researcher, conducted the intervention. The sample size was determined based on the requirements for conducting an independent samples t-test, a form of inferential statistics. Cohen states that achieving a medium effect size ($d = 0.5$) with a significance level of 0.05 and a power of 0.80 necessitates 100 participants distributed across four groups. This study adjusted the sample size according to the number of available students: four courses, each comprising 25 students. This figure is suboptimal; yet, it is acceptable for a quasi-experimental design, provided that the assumptions of normality and homogeneity are satisfied. The research encompassed 100 students from four distinct academic programs.

2.3 Variables in Research

This study encompasses three principal variables: Poster Comment-Based Cooperative Learning (PC), Local Cultural Values (NL), and Learning Outcomes. Each of these elements has a distinct function in the experimental design and data analysis. The variables are categorized into these areas. PC: Poster Comment-Based Collaborative Learning. This method enables educators to facilitate student learning through collaborative poster-based projects, allowing for the exchange of feedback. It denotes a certain pedagogical approach utilized with the experimental group. NL: Principles of the Local Culture. These ideas are integral to the native Torajan culture (Longko') and are employed in the educational process. They constitute a cultural component of the intervention. Subordinate Diverse

educational results: This is the primary outcome variable, indicating students' confidence in their ability to do character education assignments and get learning from them. After the intervention, measurement is conducted.

2.4 Instrument of Research

The study utilized pre-test and post-test instruments comprising essay and multiple-choice questions to evaluate students' learning results in the Character Education course. The exams evaluated cognitive, affective, and behavioral dimensions of character education, encompassing ethical reasoning, goal-setting, problem-solving, collaboration, and self-efficacy in executing learning tasks. Students' understanding of important ideas, principles, and facts linked to character education was tested with multiple-choice questions. Essay questions tested how well students could use concepts, think critically, and show that they could solve problems and make moral decisions. The pre-test evaluated initial knowledge and skills before the intervention, whereas the post-test assessed learning advancements after the implementation of Poster Comment-Based Cooperative Learning linked with Longko' cultural values. SPSS was used to check the instruments for validity and reliability. Indicators had outer loadings greater than 0.70, and Cronbach's Alpha and Composite Reliability (CR) were both greater than 0.90, which means they were very valid and consistent. This mix of multiple-choice and essay questions gave both quantitative and qualitative proof of how well students learned and made it possible to fully evaluate how well the intervention worked.

2.5 Data Collection Technique

Pre-tests and post-tests, observations, and documentation were all used to collect data to make sure it was correct and to cross-check it. The pre-test evaluated students' foundational learning outcomes in Character Education, encompassing ethical reasoning, teamwork, goal-setting, problem-solving, and self-efficacy. The post-test used a standardized 5-point Likert scale questionnaire to see how the intervention had helped. The observations concentrated on students' involvement in Poster Comment-Based Cooperative Learning (PC) and the implementation of Longko' cultural values (NL), encompassing cooperation, peer feedback, and adherence to cultural norms. Group projects, reflective notebooks, and posters were all part of the documentation, which showed that the students had learned and internalized the character qualities. We used SPSS to examine all of the instruments for validity and reliability (Arkkelin, 2014). The outer loadings were over 0.70, and Cronbach's Alpha and Composite Reliability (CR) were above 0.90. This multi-method strategy made sure that the data collection was strong and complete.

2.6 Data Analysis Technique

This study utilized a pre-test and post-test approach to assess the effects of Poster Comment-Based Cooperative Learning (PC) and Longko's Cultural Values (NL) on students' learning outcomes in Character Education. Before the intervention, all of the participants took a pre-test to see what they already knew and could do in character education. This ensured that any disparities between the groups at the start could be identified and controlled during the analysis. The post-test was given right after the intervention to see how it affected the students' learning. The evaluation encompassed markers of cognitive, affective, and behavioral dimensions of character education, including ethical reasoning, goal-setting, problem-solving, collaboration, and learning outcomes in task completion. We used SPSS to look at the scores from the pre-test and post-test. Descriptive statistics provided a summary of students' performance, whilst inferential statistics, including two-way ANOVA (Ong & Puteh, 2017), were utilized to analyze the main and interaction impacts of PC and NL on learning outcomes. This method let the researchers find out not only if the students did better followed the intervention, but also how much each independent variable and their combined influence helped. The study utilized pre- and post-tests to measure both the baseline and post-intervention learning outcomes of students,

yielding substantial evidence of the efficacy of integrating cooperative learning methodologies with Longko' cultural values in character education.

3. FINDINGS AND DISCUSSION

3.1 Findings

This study aims to examine the impact of a cooperative learning paradigm incorporating poster comments and Longko cultural values on students' learning results in character education. The primary objective of the study is to ascertain the influence of the poster comment method and local cultural values on students' learning outcomes regarding their performance, collaboration, and problem-solving skills. The objective of the study is to employ this culturally responsive teaching method to ascertain how the integration of indigenous values may enhance the efficacy of cooperative learning in higher education environments.

Table 2. Respondent characteristics based on gender and age

Gender	Number of Respondents	Percentage
Male	38	38%
Female	62	62%
Total	100	100%
Age		
17-18	5	5%
19-20	91	92%
21-22	4	4%
Total	100	100

A greater number of women than men participated in this study. The majority of respondents were middle-aged students. Only a limited number were in the youngest or oldest age categories. The findings indicate that most participants were women, typically aged from late teens to early twenties.

Table 3. Between-Subjects Factors

		Value Label	N
Cooperative learning model	1	Poster Comment	25
	2	Non Poster Comment	25
Longko' culture	1	Longko	25
	2	Non-Longko'	25

Table 3 indicates the experimental group participation distribution. Four 25-student groups comprised 100 students. First was the cooperative learning model, which had Poster Comment and Non-Poster Comment. Second, cultural values were Longko' and Non-Longko'. This design utilized a balanced 2x2 factorial layout to compare the impact of the learning model and cultural values on students' Character Education outcomes.

Table 4. Descriptive Statistics

Cooperative learning	Culture	Mean	Std. Deviation	N
Poster Comment	Longko	87.92	3.965	12
	Non-Longko'	63.85	5.829	13
	Total	75.40	13.222	25
	Non Poster Comment	Longko	73.85	5.460
Non Poster Comment	Non-Longko'	59.25	3.745	12
	Total	66.84	8.759	25
	Total	Longko	80.60	8.578
Total	Non-Longko'	61.64	5.376	25
	Total	71.12	11.912	50

Table 4 shows descriptive data of student learning results by category. Students taught with the Poster Comment model and Longko's values scored the highest ($M = 87.92$, $SD = 3.97$), while those taught without them earned the lowest ($M = 59.25$, $SD = 3.75$). Poster Comment groups ($M = 75.40$) outperformed Non-Poster groups ($M = 66.84$), while Longko' values ($M = 80.60$) outsourced Non-Longko' values ($M = 61.64$). These descriptive data reveal that the cooperative learning approach and cultural values significantly benefited students' character education outcomes, with Poster Comment–Longko' having the greatest impact.

Table 5. Levene's Test of Equality of Error Variances^{a,b}

		Levene Statistic	df1	df2	Sig.
Learning outcomes	Based on Mean	2.362	3	46	.084
	Based on Median	.553	3	46	.649
	Based on Median and with adjusted df	.553	3	36.688	.650
	Based on the trimmed mean	2.081	3	46	.116

Table 5 displays the outcomes of Levene's Test, which assesses the equality of variances among groups. All of the significant values ($p > .05$) show that the assumption of equal variances was met. This suggests that the ANOVA results are accurate because the differences in learning outcomes between groups were statistically significant.

Table 6. Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	5860.729 ^a	3	1953.576	82.252	.000
Intercept	253171.262	1	253171.262	10659.342	.000
Learning model	1087.147	1	1087.147	45.772	.000
Culture	4664.747	1	4664.747	196.401	.000
Poster comment learning model * Culture	280.062	1	280.062	11.792	.001
Error	1092.551	46	23.751		
Total	259856.000	50			
Corrected Total	6953.280	49			

Table 6 shows that both the cooperative learning paradigm and cultural values had big effects on how well students learned. The effect of the learning model was substantial, $F(1,46) = 45.77$, $p < .001$, with students in the Poster Comment group performing better than those in the Non-Poster group. Cultural values demonstrated a significant impact, $F(1,46) = 196.40$, $p < .001$, with students influenced by Longko' values attaining superior scores. There was also a significant interaction effect between the learning model and cultural values, $F(1,46) = 11.79$, $p = .001$, which means that the Poster Comment technique worked better when it was combined with Longko' cultural values.

3.2 Discussion

This research examined the influence of a cooperative learning model utilizing poster comments alongside Longko' cultural values on students' educational outcomes in character education. The demographic data of the respondents reveal that the majority were women, predominantly in their late adolescence. This profile is significant as this developmental phase constitutes a critical era during which students are cultivating their identity, sense of responsibility, and social awareness. When used wisely during this time, character education can affect not only academic success but also social skills and moral thinking (Agboola & Tsai, 2012). The gender makeup, predominantly female, indicates a possible receptiveness to cooperative learning methods, as prior research has demonstrated that female students are more likely to participate actively in collaborative tasks and peer-based learning environments.

The descriptive findings of this investigation revealed significant disparities among the four therapy groups. Students who utilized the Poster Comment approach while being deeply rooted in Longko' cultural values had the most significant enhancements in learning, illustrating the advantages of integrating instructional innovation with cultural competence (De Diego-Lázaro et al., 2020). Conversely, those exposed alone to poster comments devoid of cultural values, or to cultural values without poster comments, exhibited only marginal advancements, indicating that neither methodology independently sufficed to facilitate substantial enhancements in learning. The least successful consequence was shown in students, who had neither a poster comment nor cultural integration, where learning progress was essentially nonexistent. This trend strongly shows that the best way to learn is to mix cooperative learning and cultural values on purpose and with care.

The inferential analysis corroborated these observations. The findings indicated that both the learning model and cultural values independently facilitated student advancement; however, the interaction effect was the most pronounced. This means that we cannot fully understand how Poster Comment affects things without also thinking about whether it is based on cultural values. Similarly, we cannot fully understand how cultural values affect things without also thinking about whether they are based on the cooperative learning technique. This study aligns with theories of culturally responsive pedagogy, which assert that education is most effective when it mirrors the cultural experiences and values of students. Poster Comment as a way helps students to communicate their understanding, criticize concepts, and learn together through writing and pictures (Dale & Kline, 2017). However, its actual force became evident when situated inside Longko' cultural norms that prioritize respect, solidarity, communal responsibility, and moral integrity.

From a teaching point of view, the connection between Poster Comment and Longko' principles helps people learn in deeper ways. The cooperative method encourages communication, critical thinking, and teamwork, which are all important parts of character education (Ferguson-Patrick, 2020). Longko' principles, on the other hand, put these processes in a moral and cultural context. This means that working together is not just about getting things done or being successful, but also about respecting others, giving back to the community, and acting with honesty. When these two dimensions are merged, students not only learn new things or do better in school; they also learn values that shape how they act and make decisions in school, in social situations, and in their personal lives (Rauschenbach et al., 2018).

This result also shows how employing teaching methods on their own might be limited. If a poster comment is not culturally relevant, it might not get students interested at a deeper level, which would make it less successful and only lead to little gains. In the same way, cultural values that are not turned into real teaching methods may stay abstract ideas that do not have a big effect on measured learning results. Combining technique with culture fills in the gaps, turning values into real-life experiences and procedures into practices that are meaningful in a cultural context. This interaction effect underscores the necessity of creating instructional tactics that are both technically robust and culturally grounded (Aswat et al., 2022).

The results have more general effects on higher education, especially on character education. First, they confirm that cooperative learning models, which are well-known for being beneficial, can have even better outcomes when they are changed to fit the cultural backgrounds of the students. Second, they show that indigenous cultural values should not be seen as just extra information or background knowledge, but as important parts of how students learn. In settings characterized by robust cultural identification, such as Indonesian higher education, the incorporation of local values like Longko' can foster a more comprehensive and transformative educational experience. Third, the results emphasize the necessity for educators to transcend the binary of "modern methods vs traditional values" and to regard them as synergistic elements that, when integrated, promote both academic achievement and character development (Asdar et al., 2023; Akhiruddin et al., 2022).

The study indicates that educators ought to create cooperative learning activities that explicitly integrate cultural values into the learning framework. For example, you can change the poster comment to get students to not only share what they know but also think about how their views fit with the values of respect, responsibility, and community (Darlis et al., 2021). This will help ensure that learning outcomes encompass more than just cognitive gains, such as growth in social, emotional, and ethical areas. Policymakers and curriculum designers ought to acknowledge the significance of culturally responsive pedagogy by establishing frameworks that facilitate the incorporation of indigenous values into formal educational systems. This strategy not only safeguards cultural heritage but also guarantees that students acquire the necessary competencies to succeed in a globalized environment while maintaining their cultural identity.

The findings of this study underscore the transformative potential of integrating cooperative learning methodologies with indigenous cultural values in higher education. By combining Poster Comment with Longko' cultural principles, teachers may make a learning environment that not only improves academic performance but also helps students learn how to work together, solve problems morally, and internalize values that are important for building character. This synergy shows that meaningful education happens when new ideas are based on cultural authenticity, which lets students do well in school while being true to the beliefs of their community (Ganesan & Morales, 2024).

The novelty of this study combines the poster comment approach, which is a type of cooperative learning, with Longko' cultural values to improve character education outcomes in higher education. Although cooperative learning and culturally responsive pedagogy have been individually investigated, there exists a paucity of research examining the synergistic effects of their integration on student learning outcomes. This research is one of the initial studies to empirically illustrate that the efficacy of a cooperative technique is not consistent but rather contingent upon its congruence with local cultural frameworks. The results indicate that poster comment activities, which prioritize collaboration and peer connection, are most effective when supported by Longko' values of respect, solidarity, and collective responsibility. Both the cooperative learning and cultural education literature show that combining cooperative learning with indigenous culture leads to much bigger gains in character education. It also gives us new ideas about how to systematically incorporate local wisdom into modern teaching methods.

The study provides compelling evidence that the integration of Poster Comment cooperative learning with Longko' cultural values improve character education outcomes; nonetheless, many limitations must be recognized. The limited sample size and brief intervention duration may restrict

the generalizability of the results, and possible self-report bias might have affected students' replies. Furthermore, the gender discrepancy in the sample may have influenced the results, indicating the necessity for more equitable involvement in subsequent investigations. The results, however, suggest that the Poster Comment–Longko' paradigm has potential for adaptation to other indigenous cultural values or various topic areas to enhance culturally grounded learning. This research underscores the necessity of equipping educators with culturally responsive pedagogy that amalgamates indigenous knowledge with active, collaborative learning techniques to enhance character development and academic success.

4. CONCLUSION

This study contributes to the growing body of literature on character education by empirically examining the integration of a cooperative learning model with indigenous cultural values in a higher education context. The findings indicate that the Poster Comment cooperative learning approach effectively promotes active participation, collaboration, and deeper conceptual understanding among students, while the incorporation of Longko' cultural values strengthens students' moral awareness, respect for others, and sense of communal responsibility. The combination of these pedagogical and cultural elements demonstrates that learning models which integrate culturally relevant values with collaborative instructional strategies can enhance both academic engagement and character development. Nevertheless, this study has several limitations, including its relatively limited sample scope and short-term implementation, which may restrict the generalizability of the findings and the observation of long-term character development outcomes. Therefore, future research is recommended to employ longitudinal designs to examine the sustained effects of culturally integrated cooperative learning on students' character formation and academic growth. Additionally, researchers may consider using mixed-method approaches to gain deeper insights into students' experiences and perspectives, expanding the study to diverse educational contexts and larger participant groups, and exploring innovative adaptations such as the use of digital or technology-supported poster comment activities to further enhance collaborative and culturally responsive learning environments.

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